INDEX

VOL. XXI Wireless Engineer 1944

PAGE

ABSTRACTS AND REFERENCES (*see special Index published separately, priced 2s. 8d., including postage*)
Active Electrical Transducers, Operating Conditions of, B. M. Hadfield 368
Aerial Characteristics, R. E. Burgess 154
(*Editorial*) 153
Aerial, The Half-Wave Dipole (*Editorial*) 557
Aerials, Screened Loop, R. E. Burgess 210
(*Correction*) 358
Air-Cored Self-Inductances, Temperature Coefficient of, A. Bloch 359
Amplification Factor, Valve, H. Herne 59
Amplification, Geometry of Push-Pull, R. L. Russell ... 463
(*Correspondence*) 584
Amplifiers, Coupled and Staggered Circuits in Wide-Band, D. Weighton 468
Angle of the Inverted Cone Transmission Line which Simulates the Radio Waves (*Editorial*) 305
Application of Helmholtz's Theorem to Aerial Characteristics (*Editorial*) 153
Attenuator Design, R. F. Blackwell and T. A. Straughan ... 122
Audio-Frequency Mixers, M. F. Cooper... 117

Baird "Telechrome" (*Illustration*) 431

BOOKS:
Cathode Ray Oscillograph in Industry, W. Wilson (*Review*) 266
Die Beziehung zwischen Nutzspannung und Störspannung bei der Frequenz-umsetzungen der drahtlosen Mehrkanaltelefonie, E. Huber (*Review*) 429
Ein Röhrengerät zur Messung von Leistung, Spannung und Strom, Alfred Spälti (*Review*) 429
Elements of Radio, A. and W. Marcus 326
Erzwungene elektrische Schwingungen an rotations symmetrischen Leitern bei zonaler Anregung, E. Metzler (*Review*) 429
Glossary of Terms used in Telecommunication, B.S.I. (*Review*) 209
Heaviside's Operational Calculus made Easy, T. H. Turney (*Review*) 478
Introductory Magnetism and Electricity, T. M. Yarwood 326
Plastics—Scientific and Technological, H. Ronald Fleck... 277
Physics and Radio, M. Nelkon (*Review*) 478
Radio Data Charts, R. T. Beatty and J. McG. Sowerby 121
Radio Receiver Design, K. R. Sturley (*Review*) 22
Radio Technology, B. F. Weller 277
(*Review*) 585
Radio Waves and the Ionosphere, T. W. Bennington ... 319
Technique of Radio Design. E. E. Zepler (*Review*) ... 23
Testing Radio Sets, J. H. Reyner 116
Wave Filters, L. C. Jackson (*Review*) 123
Worked Radio Calculations, Alfred T. Witts 277
British Institution of Radio Engineers:
Report on Post-War Development in Radio Engineering —Part I 329
1944/5 Council 570
British Radio Equipment Manufacturers' Association, Formation of 479

Cables, Testing High-Frequency, F. Jones and R. Sear 512, 571
Capacitance, Effect of Stray, on Coupling Coefficient (*Editorial*) 357
Cathode-Coupled Oscillators, F. Butler 521
Ceramic Insulating Materials, W. Küsters 13
"Chance" Sealing Glasses—Technical Data 479
Characteristic Impedance of Transmission Lines, C. C. Eaglesfield 222
(*Correspondence*) 279
Circuit Problems, A Method of Solving Certain Non-Linear, W. H. B. Cooper 323
Climatic Conditions, Extreme, P. R. Coursey 412
Coefficient of Capacitance, Temperature, W. Schick 65
(*Correspondence*) 175
Concentric Line, The Non-Reflecting Termination of a (*Editorial*) 409
(*Correspondence*) 480
Condensers, Power Loss in Deflecting, D. Gabor 115
(*Correspondence*) ... 176, 207, 279, 327, 358, 430, 528, 584
Coupled and Staggered Circuits in Wide-Band Amplifiers, D. Weighton 468
Coupled Circuits (*Editorial*) 53
Coupling Coefficient, Effect of Stray Capacitance on (*Editorial*) 357
Current, Variable Slope with Constant, W. H. Stevens... ... 10
Cylindrical Cavity Resonators, C. F. Davidson and J. C. Simmonds 420

Deflected Electron Beams, J. H. Owen Harries 267
(*Correspondence*) 327, 358, 430, 480, 528, 584
Deflecting Condensers, Power Loss in, D. Gabor 115
(*Correspondence*) 176, 207, 279, 327, 358, 430, 480, 528, 584
Dielectric Properties, Nomenclature of (*Editorials*) ... 206, 307
(*Correspondence*) 328, (*Correction*) 358
Dipole Aerial, The Half-Wave (*Editorial*) 557
Direct Reading of the Frequency of Resonant Circuits (1943 *Correction*) 584

EDITORIALS:
Angle of the Inverted Cone Transmission Line which Simulates the Radio Waves 305
Application of Helmholtz's Theorem to Aerial Characteristics 153
Coupled Circuits 53
Effect of Stray Capacitance on Coupling Coefficient ... 357
Effect of the Earth's Magnetic Field in the Ionosphere ... 1
Half-Wave Dipole Aerial 557
Inductance of a Circuit Consisting of Two Parallel Wires... 461
Non-Reflecting Termination of a Concentric Line ... 409
Patent Decision (Marconi's W. T. Co., *v.* United States) ... 253
Problem of Two Electrons and Newton's Third Law ... 105
Resonance in Quarter-Wave Lines 509
Variable-mu or Variable-μ ? 205
Effect of Stray Capacitance on Coupling Coefficient (*Editorial*) 357
Effect of the Earth's Magnetic Field in the Ionosphere (*Editorial*) 1
Electrical Transducers, Operating Conditions of Active, B. M. Hadfield 368
Electrical Units, Reform of (*Correspondence*) 527
Electromechanical Equivalence, Notes on, H. Jefferson ... 563
Electron Beams, Deflected, J. H. Owen Harries 267
Electron Beams, Transversely Deflected, D. Gabor 115
(*Correspondence*) 176, 207, 279, 327, 358, 430, 480, 528, 584
Electron Space Charges, Energy and Permittivity of, W. E. Benham 320
Electrons, A Problem of Two, and Newton's Third Law (*Editorials*) 105, 511
Energy and Permittivity of Electron Space Charges, W. E. Benham 320
Extreme Climatic Conditions, P. R. Coursey 412

Filters, Ideal (*Correspondence*) 57
Filters, Single-Section *m*-Derived, C. W. Miller 4
Fourier Analysis by Geometrical Methods, H. Paul Williams 108
Frequency of Resonant Circuits, Direct Reading of the (1943 *Correction*) 584
Frequency Modulation, A Note on, F. M. Colebrook 112
(*Correspondence*) 278
Frequency Transmissions, Standard (U.S. National Bureau of Standards) 430
Fresnel's Reflection Formulae and Parallel Transmission Lines, A. Bloch 560

Geometrical Methods, Fourier Analysis by, H. Paul Williams 108
Geometry of Push-Pull Amplification, R. L. Russell ... 463
(*Correspondence*) 584

Half-Wave Dipole Aerial (*Editorial*) 557
Helmholtz's Theorem, Application of, to Aerial Characteristics (*Editorial*)... 153
High-Frequency Cables, Testing, F. Jones and R. Sear 512, 571
Honours List: Cockcroft, Prof. J. D.; Duncan, W. A.; Hacker, R. H.; Kinman, T. H.; Landale, S. E. A.; Lipman, M. I.; Oura, H. L.; Robinson, F. C.; Tingey, W. C.; West, S. S. 319

Ideal Filters (*Correspondence*) 57
Impedance of Transmission Lines, Characteristic, C. C. Eaglesfield 222
(*Correspondence*) 279
Inductance of a Circuit Consisting of Two Parallel Wires (*Editorial*) 461
INDUSTRY, THE:
Andre, T. B., Rubber Co. Ltd., Handbook on Rubber to Metal Bonding 174
Dundas, R. K. Ltd., "Microtimer" 174
"Dryair" Desiccating Elements 585

PAGE

Institution of Electrical Engineers:
1944/5 Council 382
Premium Awards 328
Wireless Section now Radio Section 382
Insulating Materials, Ceramic, W. Küsters 13
Inverted Cone Transmission Line which Simulates the Radio Waves, The Angle of the (*Editorial*) 305
Ionosphere, Phase and Group Velocity in the (1943 *Errata*) ... 57
Ionosphere, The Effect of the Earth's Magnetic Field in the (*Editorial*) 1

Linearity Circuits, Arthur C. Clarke 256
Loop Aerials, Screened, R. E. Burgess 210
(*Correction*) 358
Loss-Less Transmission Lines, A. Bloch 161

Magnetic Field in the Ionosphere, The Effect of the Earth's (*Editorial*) 1
Marconi's W.T. Co. *v.* United States, Patent Decision (*Editorial*) 253
m-Derived Filters, Single-Section, C. W. Miller... 4
Method of Solving Certain Non-Linear Circuit Problems, W. H. B. Cooper 323
Mixers, Audio-Frequency, M. F. Cooper 117
Modulation, A Note on Frequency, F. M. Colebrook 112
(*Correspondence*) 278

New Valve-Oscillator Circuit, F. Butler 317
Newton's Third Law, A Problem of Two Electrons and (*Editorials*) 105, 511
Nomenclature of Dielectric Properties (*Editorials*) ... 206, 307
(*Correspondence*) 328, (*Correction*) 358
Non-Linear Circuit Problems, Method of Solving Certain, W. H. B. Cooper 323
Non-Reflecting Termination of a Concentric Line (*Editorial*)... 409
(*Correspondence*) 480
Notes on Electromechanical Equivalence, H. Jefferson ... 563

Obituary—Dr. Norman Partridge 326
Operating Conditions of Active Electrical Transducers, B. M. Hadfield 368
Oscillators, Cathode-Coupled, F. Butler 521

Parallel Transmission Lines, A. Bloch 280
Parallel Transmission Lines, Fresnel's Reflection Formulae and, A. Bloch... 560
Parallel Wires, The Inductance of a Circuit Consisting of Two (*Editorial*) 461
Patent Decision—Marconi's W.T. Co. *v.* United States (*Editorial*) 253
Phase and Group Velocity in the Ionosphere (1943 *Errata*) ... 57
Phase Discriminator, K. R. Sturley 72
Post-War Development—R.M.A. and Brit. I.R.E. Reports ... 329
Power Loss in Deflecting Condensers, D. Gabor 115
(*Correspondence*) 176, 207, 279, 327, 358, 430, 480, 528, 584
Problem of Two Electrons and Newton's Third Law (*Editorials*) 105, 511
Push-Pull Amplification, Geometry of, R. L. Russell ... 463
(*Correspondence*) 584

Quarter-Wave Lines, Resonance in (*Editorial*) 509

R.M.A. Report 329
R.M.A. Television Committees 221
Radio Heating, Thermal Conduction with, H. Herne ... 377
Reform of Electrical Units (*Correspondence*) 527
Resonance in Quarter-Wave Lines (*Editorial*) 509
Resonant Circuits, Direct Reading of the Frequency of (1943 *Correction*) 584
Resonators, Cylindrical Cavity, C. F. Davidson and J. C. Simmonds 420

Screened Loop Aerials, R. E. Burgess 210
(*Correction*) 358
Sealing Glasses, "Chance"—Technical Data 479
Single-Section *m*-Derived Filters, C. W. Miller 4
Slide Rule, G. A. Hay 124
Slope (Variable) with Constant Current, W. H. Stevens ... 10
Specific Resistance, Volume Resistivity and Mass Resistivity (*Editorials*) 206, 307
(*Correspondence*) 328, (*Correction*) 358
Staggered and Coupled Circuits in Wide-Band Amplifiers, D. Weighton 468
Standard Frequency Transmissions, U.S. National Bureau of Standards 430
Standards, United Nations Coordinating Committee 329
Superheterodynes, Three-Point Tracking in—II, Kurt Fränz... 425

Television Committees, R.M.A. 221
Temperature Coefficient of Air-Cored Self-Inductances, A. Bloch 359
Temperature Coefficient of Capacitance, W. Schick 65
(*Correspondence*) 175
Terminology, Variable-mu or Variable-μ? (*Editorials*)... 205, 255
Terminology, Wave Guide (*Correspondence*) 24
Testing High-Frequency Cables, F. Jones and R. Sear 512, 571
Theorem, A Valve-Oscillator (*Correspondence*) 23
Theorem, The Application of Helmholtz's to Aerial Characteristics (*Editorial*)... 153
Theory of Ideal Filters (*Correspondence*) 57
Thermal Conduction with Radio Heating, H. Herne 377
Three-Point Tracking in Superheterodynes—II, Kurt Fränz... 425
Transducers, Operating Conditions of Active Electrical, B. M. Hadfield 368
Transmission Line, The Non-Reflecting Termination of a Concentric (*Editorial*) 409
(*Correspondence*) 480
Transmission Line Theory, F. M. Colebrook 167
Transmission Line which Simulates the Radio Waves, The Angle of the Inverted Cone (*Editorial*) 305
Transmission Lines, Characteristic Impedance of, C. C. Eaglesfield 222
(*Correspondence*) 480
Transmission Lines, Loss-Less, A. Bloch 161
Transmission Lines, Parallel, A. Bloch 280
Transmission Lines, Parallel and Fresnel's Reflection Formulae, A. Bloch 560
Transmission Lines, Resonance in Quarter-Wave (*Editorial*) ... 509
Transversely Deflected Electron Beams, D. Gabor 115
(*Correspondence*) 176, 207, 279, 327, 358, 430, 480, 528, 584

U.S. National Bureau of Standards. Standard Frequency Transmissions 430
United States Standards Co-ordinating Committee 329
University Research Fellowships (I.C.I.) 431

Valve Amplification Factor, H. Herne 59
Valve-Oscillator Circuit, New, F. Butler... 317
Valve-Oscillator Theorem (*Correspondence*) 23
Variable-mu or Variable-μ? (*Editorials*) 205, 255
Variable Slope with Constant Current, W. H. Stevens... ... 10
Velocity in the Ionosphere, Phase and Group (1943 *Errata*) ... 57

Wave Guide Terminology (*Correspondence*) 24
Wheatstone Bridge Network, A New Treatment of the, Raymond J. Wey 308

INDEX TO AUTHORS

PAGE

Benham, W. E. 320
Blackwell, R. F. and Straughan, T. A. 122
Bloch, A. 161, 280, 359, 560
Burgess, R. E. 154, 210
Butler, F. 317, 521

Clarke, Arthur C. 256
Colebrook, F. M. 112, 167
Cooper, M. F. 117
Cooper, W. H. B. 323
Coursey, Philip R. 412

Davidson, C. F. and Simmonds, J. C. 420

Eaglesfield, C. C. 222

Fränz, Kurt 425

Gabor, D. 115

Hadfield, B. M. 368
Harries, J. H. Owen 267
Hay, G. A. 124
Herne, H. 59, 377

Jefferson, H. 563
Jones, F. and Sear, R.... ... ... 512, 571

Küsters, W. 13

Miller, C. W. 4

Russell, R. L. 463

Schick, W. 65
Sear, R. with Jones, F. 512, 571
Simmonds, J. C. with Davidson, C. F. 420
Stevens, W. H. 10
Straughan, T. A. with Blackwell, R. F. 122
Sturley, K. R. 72

Weighton, D. 468
Wey, Raymond, J. 308
Williams, H. Paul 108